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For Amateurs of Both Sexes.

No. 21. VOL. I.

MARCH 7, 1896.

ONE PENNY.



Fretwork,—Hints on Polishing.
Hand Painting on China.
Photographic Notes and Hints.

Notes on Sport.
Stamp Collecting.
Bee-Keeping.
Pigeons.

Wood Carving.

How to Ride à Bicycle.
Weekly Presentation Design.
Correspondence, Etc.



DESIGN No. 21B.



By C. N. WHITE,

First Class Certificated Expert of the British Bee-Keepers' Association.

CHAP. IV.-HIVES.

hE style of Hive provided for the bees is thought by some persons to be a matter of very little importance, but no question has of late been more discussed in American Bee Journals than the size of Hive best suited for success in beekeeping. It is beyond doubt that bees will occupy and store

honey in a box, pail, or almost any receptacle of moderate size, but our aim in providing a Hive should be to give a brood-chamber of such a capacity that supers may be taken to at the right time and filled with the surplus honey gathered.

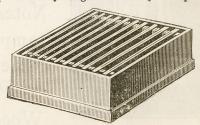
The old-fashioned dome-shaped skep is fast going out of use, and in its place a flat-topped skep, 10 inches deep, and 15 or 16 inches in diameter, is used as a brood-chamber, while two or more supers, 6 inches deep and a little less in diameter than the skep, are used for the accommodation of surplus. This system of beekeeping is the least interesting, and is at the same time only moderately profitable in comparison with the Hives in which foundation may be used.



TIERING HIVE.

No one desirous of making the most of his opportunity for profit prowill ducing adopt any but the most advanced or mova ble-comb system, for in it bees the are under complete control, inasmuch as the combs, being built in frames, are movable; and the supers are easily pre-prepared and

fixed upon the brood-chamber, while with certain precautions they are almost as easily removed. It is, therefore, only this style of Hive that will be recommended and described. The Hive here illustrated is known as the Tiering Hive, and is composed of the following parts:-floorboard, brood-chamber, super, lift and roof. The brood-chamber is of a size to accommodate ten standard frames, 14 by 8½ inches, with 17-inch top bar. The frame ends rest upon metal runners, and there is a space left below the frames of at least 3 inch; therefore, as the top bar is 3 inch thick, the inner walls upon which it rests are 81 inches deep, while the outer walls are the thickness of the top bar, but $\frac{3}{8}$ -in. deeper, that is $8\frac{7}{8}$ ins. As there must always be a space of 4-inch between the movable parts, this space is allowed between the ends of the bars and the inner walls; consequently the width of the Hive inside, from front to back, is 141 inches. The outer walls are 17 inches apart, so that when the frames are in position they hang so that the 4-inch space is



SHALLOW FRAME SUPER.

preserved at the ends, and the $\frac{3}{4}$ in. beneath the frames. The inside dimensions as given are important, but the outside dimensions are solely regulated by the thickness of the material used in Hive making, and as to whether or not double walls are provided. As the Hive is to hold ten frames, the width from side to side is 15 inches.

The surplus receptacles may be either shallow frame supers or section crates, but in either case each Hive should be provided with at least two, (three would be better,) so that when the honey flow is at its height, and honey is literally pouring in, there may be no lack of storing room, for the honey that a strong stock will gather in a few days at such times is simply astounding, and it is a pity that any should be lost for want of supers.

The shallow-frame super is so called because in it are used frames three inches less in depth than the standard frames; and it is that much shorter than the brood-chamber. 3-inch is the space left beneath the frames of the two chambers. From these combs, when the cells are filled and sealed, the honey is obtained by means of the extractor, the use of which handy machine will be described in a subsequent article. The liquid honey thus obtained is put into bottles or cans for the market; but honey in the comb is much sought after, and therefore, to obtain this class of honey another style of super must be given. Comb honey is generally obtained in small boxes holding about one pound. The boxes or sections as they are called are imported from America in the flat, and being grooved and rebated, it is a simple task to convert them into boxes $4\frac{1}{2}$ inches square and $1\frac{\pi}{4}$ -inch wide. Before these sections can be used for the storage of honey a piece of foundation, or a full sheet, must be fixed in the middle of the



SECTION CRATE.

top as a guide to the bees in making the combs evenly in the sections. This guide is fixed either by means of pressure, or by running along the edge of the foundation a

little melted wax. The sections are then placed three in a row in oblong boxes or crates, the corners resting upon bars running from end to end of the crate, 1-inch thick and 1-inch wide. But, in order to compel the bees to keep their work confined evenly in the sections, the Hive must be set perfectly level, and thin boards, termed separators, must be placed between the rows of sections.

The above may be termed the orthodox methods of obtaining surplus honey-extracted and sectional—but there still remains another means of obtaining an equally large return with considerably less labour, which, though it may be looked upon as unorthodox, is still a most satisfactory means to the end we have in view, viz., obtaining the greatest amount of surplus per colony with the least expenditure of time and money. The super referred to is known as the "Ivo," and is used in connection with the Ivo bar or fixed comb Hive, but with equal success upon the bars of a movable comb Hive. It consists of four walls $4\frac{1}{2}$ inches deep. The width inside is 13 inches to accommodate seven bars, which are $1\frac{5}{6}$ inches wide and $\frac{3}{8}$ -inch thick, and the length inside measure is 14 inches. There is a 4-inch rebate, on the inside top of the front and back walls, in which the ends of the bars, which are 141 inches long, rest. A sawcut is made in the middle of the bar to receive the foundation, and in order to afford a passage way to a super above, \frac{1}{8}-inch is cut out of each side of the bar for nine inches of the length. When the bars are fitted into position there is a space of 1 inch between them, and all fit tightly at the ends.

If this kind of super is used, pieces of foundation 3 inches in depth only need be given, but then it is absolutely necessary. If the super is to be reserved for honey alone, then a sheet of queen-excluding zinc should be placed upon the frames before the super is put into position. Being put on during the honey-flow, it will be an advantage to use only 3-inch pieces of foundation, as the bees will thus have an opportunity for using wax which, during such times of plenty, they involuntarily secrete. Then again the bees are able to form large clusters, and thus, by the consequent increase of temperature, accelerate wax secretion and combbuilding as well as the storing and ripening of honey. When filled these supers hold about 25 lbs. of honey. The combs are cut from the bars and dropped into a pan, where they are sliced. If the sliced combs are then placed in a strainer or the upper compartment of the honey cistern, the honey, equal in every respect to that extracted from combs, drains through into the cistern below.

The simplicity of this method of supering cannot be fully appreciated until after a season's (To be continued.)



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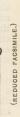
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NOTES OF THE WEEK.

Show there was an exhibition of Photographs of dogs. Some very excellent portraits of the "friend of man" were shown. Many of them were considerably above the usual fancy Photograph, and shewed a knowledge of the points and peculiarities of dogs of different breeds. Good Photographs of animals, especially when they are sent from place to place, to dog or other shows, must popularise them and be of service in many ways. At the Photographic Club, and at the London

At the Photographic Club, and at the London and Provincial Society, exhibitions of Photographs were held a few weeks back, and through the ingenuity of Mr. Welford and Mr. Fortune a means of showing them was devised without the intervention of "nails in the walls." The idea originated with Mr. Fortune, we understand. Strips of wood, about a couple of inches wide and about half an inch thick, are nailed together to form frames of a convenient height and width, with one or two crossbars, which serve the double purpose of strengthening the frames and suspending the pictures from. The frames thus made are hinged together with pieces of strong webbing, very much on the same principle as the domestic clothes horse. These are self supporting and answer admirably. In connection with the new Photography,

In connection with the new Photography, or, as it is likely to be called, "Electrography," a member of the Optic Society of Paris has discovered that ivory and plain white glass are impervious to the X rays.

Mr. Algernon Brooker, whose name is a household word with every Photographer who visits Hastings, has given up his business as a chemist, and confines himself entirely to the sale of Photographic material and apparatus. Mr. Brooker is in himself a complete gazetteer of the Photographic beauties of Sussex, especially the "bits" in and around Hastings. So far as Photography and the knowledge of science and art goes, Mr. Brooker is a veritable encyclopædia. Visitors to Hastings who have got the Photographic fever should go and see him; he will prescribe for and allay the most dangerous symptoms.

The National Photographic Star Catalogue is making progress. At the last meeting of the Royal Astronomical Society it was stated that already 130 of the prints taken for the catalogue have been measured. It is estimated that about 180 plates can be measured and 100 of them reduced in a year. The section allotted to Greenwich comprises about 150,000 stars, and it is estimated that the work will be completed in about six years. There are sixteen

other observation centres, so it is possible that within the next decade, at least, the whole catalogue comprising between two and three million stars will be complete.

As showing the enormous business done in Photography, we may mention that one well-known firm's sale of cameras is something very nearly approaching 20,000 per annum. Since they started they have sold 145,000 cameras and 210,000 lenses. The firm might well put out as a sign a camera, and append to it the motto sub hoc signo floresco.

Writing upon the "Question of size," in Photography, Mr. Chapman Jones recently said: "Anything smaller than a half-quarter plate $3\frac{1}{4} \times 2\frac{1}{8}$ must be regarded as approximating so closely to the domain of toys, or as sacrificing everything to portability, that they do not demand serious attention. Such small apparatus may be very useful, but solely on account of its smallness. The half-quarter plates, however, have distinct advantages. They are easily obtained, as with a guage and glass cutter one can rapidly cut up a dozen plates. They are easily stored, and this is important when many are used, as in a long series of scientific Photographs. We do not counsel the use of any size less than ‡ plate. It has the advantage of allowing, if the negative is used for making Lantern Slides, of giving a little "Scantling" or margin, and if used to enlarge from, and taken with a lens of six inch focus, when enlarged two diameters it will give a picture whole plate size.

Mr. Welford, at a recent meeting of a Photographic Society, is reported to have exhibited a Photograph of an ant held by finger and thumb, holding a sixpenny piece which he had calculated to be equal to a man holding ten tons!!!

Miss Alice E. Ruegg, writing upon "The Pleasures of Photography Point of View," says:—"Or does your role lie in philanthropic efforts to enlighten and amuse the ignorant? You can apply the delightful art of Photography to the manufacture of Lantern Slides, which shall instruct and charm large audiences. Indeed of all hobbies this is the most unselfish in its results. If you take a beautiful (Oh that if!) picture, it is valuable to you because you can send copies to all your friends. If you are lucky enough to take a portrait that pleases the sitter, how proud you are to give it away! If you work at Lantern Slides, it is not for your own benefit, but to please audiences, per chance unknown to you."

In filtering liquid the funnel is found too small to be supported by the mouth of the bottle or beaker into which the liquid is being filtered. In such a case take a piece of cardboard large enough to cover the mouth of the vessel, bore a hole in the centre of it, and place the funnel therein.

In the Photographic News Mr. Edmond Wallis thus describes "A Home-made Flashlight Lamp." He says:—"To secure good results, two flashes are necessary, one for the light side of face, and one farther back for the shadow side. For the two Lamps the materials required will be 2 ft. $\frac{1}{2}$ inch common compo gas pipe (one foot for each lamp), two pieces of floor board $9 \times 6 \times 1$ inch thick, 4 yards of thin india rubber tubing, a few staples, some thin wire, and cotton wool. To make the lamp take one foot of the gas pipe, turn up four inches at one end, and open the mouth a little to make it slightly funnel shaped. Then bind round just below the edge some of the cotton wool, using the thin wire. Drive two staples over the pipe to fix it to the board, allowing about an inch to project for the rubber tubing to fit on. Make the other lamp in the same way and all that has to be done is to put about as much magnesium powder as will lie on a sixpence down the top of the pipe, and, having soaked the cotton wool with methylated spirit to set fire to it, take the two ends of the tubing and placing them both in the mouth together blow sharply and strongly down them, and the powder will be forced upward through the spirit flame. There will be no need to cap the lens unless the room is strongly lighted independently of the flash lamps."

The troubles of a Photographic tourist were very graphically and amusingly described in a lecture recently delivered at Brixton by Mr. R. G. F. Kidson. He divided the subject into the following troubles:—Trouble No. 1, "Where to go"; No. 2, "With whom to go"; No. 3, "What Photographic luggage to take"; No. 4, "Positively certain that you've got everything"; No. 5, "Getting off"; No. 6, "Getting Lodgings"; No. 7, "The Photographic Properties of the Lodgings"; No. 8, "What to take"; No. 9, "Figure Studies"; No. 10, "The Howling Mob." These troubles would each make the text for a good paper on Photography.

The "New Photography" is on every hand. Mr. Banner, of Glasgow, has, he states, made some successful experiments with gas. In the bottom of one of the cardboard boxes in which they pack plates he placed an Ilford rapid plate, film side up; then on the surface of the plate he placed several articles, knife, coins, buttons, &c. The lid was then put on the box and all wrapped up in a focussing cloth made of black velvet lined with red calico. This package was then placed, so states Mr. Banner, below an ordinary bats-wing burner at about a foot distance, the exposure being about two hours, which, he says, has resulted in a very good negative. We should be disposed, notwithstanding the fact that it comes "frae the land of the leal," to take Mr. Banner's statement cum grano salis. If such a thing does happen, how is it that there have not been some very alarming and startling Photographs discovered on plates kept in boxes in dealers shops, studios, laboratories, &c., &c.?

A Peculiar Hobby.

I may as well confess at once. I am an unsuccessful literateur. At one time my mind was filled with ambition. I used to pass long hours dreaming of the fame and wealth which my writings would be sure to bring me. But, alas! my hopes were disappointed. At first I felt deeply grieved to find that my cherished MSS. were ruthlessly rejected by the King of the Sanctum. Now, things are rather different. When it became painfully evident that my MSS. could find no place to rest, I conceived the idea of having a collection of Editor's Rejection Notes. So I wrote an article, which I was pretty certain no Editor would accept, and posted it to a weekly paper, enclosing the usual stamped addressed envelope. In course of time my MSS. was returned, accompanied by a neatly lithographed notice:—"The Editor is much obliged for the kind offer of the accompanying MSS., but regrets that he is unable to make use of it."

I then re-posted my article to another influential weekly, but what was my disappointment when it was returned without a note of any kind. However, I posted it again, and in the course of a few days my eyes were enriched with the sight of my own MSS., this time accompanied by a rather dirty half sheet of note paper, on which was scribbled in scarcely legible characters—"MSS. returned—unsuitable."

Again I committed the paper to the care of the Post Office officials, and again it found its way back with a printed note on which was displayed the picture of a huge building, which I understood was a representation of the office of the journal returning the MSS. Many were the periodicals to which my "copy" was sent, and they as faithfully returned it, accompanied by notes of all shapes and sizes, each one varying in phraseology, typography or caligraphy. When the notes were written, a little bit of advice was occasionally added. To judge from the profusion of thanks bestowed upon me by the various Editors, one would think I had done some great service. At last I have collected what may be considered a fairly representative pile of editorial letters of rejection; but imagine my grief, when a few days ago, a wellknown monthly really published my MSS.

The above was sent us by a correspondent, whose name we good-naturedly withhold. His object was obviously to add to his collection at the expense of "Hobbies." In vain, however, is the net spread in sight of any bird, and we print his manuscript and thereby expose his nefarious scheme.—Editor "Hobbies."



THE PHOTOSCRIPT For Titling Negatives.

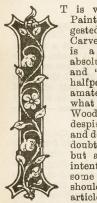
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CHAP. XIII.—PAINTING, GILDING, STAINING, ETC.



is with some hesitation that Painting and Gilding are suggested as methods for finishing Carved work. "Paint," especially, is a word which many ears absolutely refuse to listen to; and "Gilding" has a twopenny halfpenny sound about it, which amateurs with a lofty sense of what is beautiful and artistic in Wood Carving will utterly despise. This superior air of loyalty and devotion to high Art should, no doubt, be strongly commended, but at the same time it is the intention here to suggest that in some cases the decorator's craft should be patronised. In many articles, such as Mirrors and Picture Frames, it is not only per-

missible, but advisable to paint or gild. Work in the Adams style looks exceptionally well when painted white; and it is a serious question to consider where we should be without our gilt Chippendale mirrors and overmantels.

PAINTING.

When Carving is to be painted, it should be left fairly bold, and there are no objections to a few sharp lines, as these will be duly softened with a few coats of colour. Pine wood is specially suited for painting, as it is soft, and therefore liable to break when undergoing the rougher staining process. Only white paint should be used for those articles which the amateur is likely to make; when dark colours are wanted, stains should be employed. The paint should be laid on thinly, and three or four coats applied till the surface has a pleasant enamelled appearance. Each coat should be thoroughly dry before the next is put on, and any appearance of roughness or clogging must be removed with Sandpaper.

GILDING.

Articles which are to be in gilt do not require to be highly carved; that is, the finish need not be elaborate, as the subsequent process would entirely cover it. Sharp edges, however, should not be encouraged, as the gold

leaf is difficult to apply and might have a tendency to rub off. The ornament has to receive several coats of white, in the way just described, and care must be taken that the surface is kept perfectly smooth; the free use of Glasspaper is absolutely necessary. It might be remarked parenthetically that the severe strictures to shun anything in the way of Sandpaper are only withdrawn when the article is to be painted or gilded. At least four coats of paint must be given, as it is only then that the surface will be quite smooth and ready for the gold leaf. At this stage the worker must see that all his materials are ready at hand. These may be procured in any colour store, and are comparatively inexpensive. A book of gold leaf—or two, if the article is large—is the most obvious necessity. This must not be opened in the street on a windy day, and should never be allowed into the hands of small brothers or



MIRROR FRAME-ADAMS STYLE.

sisters. A chamois pad is required for cutting the leaf on, and a gilder's tip, which is in reality a comb set with hairs, must be had to apply the

gold to the article. One large and one small camel hair brush, and some gold size complete the outfit. All gilding should be done within "locked doors." Draughts and dust are fatal Draughts and dust are fatal objections, and there are, besides, other reasons why solitude is an advantage. Gold leaf is about the most unmanageable commodity in existence, and if there is one person in the world more likely than another to forget himself, it is the amateur who attempts gilding for the first time. The article must receive a thin coat of gold size, and be left till this is almost dry. Then a sheet of gold leaf may be taken and placed carefully on the pad, where it can be cut into any convenient size and shape. Every care must be taken not to touch the gold with the hand, as it would at once stick, and the leaf would consequently tear. For the same reason neither the knife blade nor the leather pad should be fingered. The amateur will feel some difficulty in thus having to deal with a material where no handling is allowed, but he will experience more annoyance if these cautions are neglected. What he requires are care, neatness, patience, and, above all, a moderately even temper. To apply the gold, take the hair comb, press it for a moment on the cheek (which gives it a certain adhesive power), and pick up the leaf. Quickly, but carefully, lay it on the article, and work it into position with the camel hair brush. Proceed in this way till the whole is gilded; then blow off the surplus leaf, and dust the article very gently with a clean soft brush. The only real difficulty will be found in manipulating the gold leaf. The least displacement spoils the leaf, and it will be found to get easily crumpled up. Neatness of fingering is a great requisite, and the amateur who possesses such a gift will soon learn the

STAINING, ETC.

Carved work should not be French polished or A high gloss is very objectionable, and should be universally discouraged. Even Stains are only conditionally recommended, and should not be used without some consideration.

In applying an ordinary Stain, such as Walnut, Rosewood, or Mahogany, dilute the colour with water, and give two or three coats. Take up very little colour on the brush, as any watery liquid causes the wood to swell and spoils the surface. When the last coat is thoroughly dry, rub down with a hard brush (an ordinary nail brush is best), and then apply a little boiled linseed oil with a soft rag. This is used to fix the Stain. When dry, rub down again, and finish off with a coat of wax and turps. This last preparation can easily be made. Put two parts of beeswax and one part of what is called Burgundy pitch into a little turpentine, and place on the fire till all is melted. Stir freely, and take care that the preparation does not boil. When almost cool and stiff, take a hard stumpy brush and apply the wax. It will occasionally be necessary to moisten the brush with turps. When this is dry, which will not be for a few hours, rub down once more with the nail brush. This plan can be adopted even when no stains are used, but several coats of wax might be necessary.

Oak looks best when fumigated with ammonia, but as this process requires an air-tight case, and is otherwise difficult, the amateur should not try it with any important work. Any furniture makers could do it at a reasonable cost.

A fairly good Stain for Oak can be made with an equal mixture of turps and linseed oil. Apply discriminately, and when dry rub down as usual. For light coloured woods a few coats of white French polish produce a good effect. Colourless lacquer is also good, but is somewhat expensive.

Ebony Stains are applied in the usual way, and then rubbed with a hard brush; this gives a dead black, but if a slight polish were wanted, the wax preparation could afterwards be used.

In all Staining the points to remember areto apply as little colour as possible so as to prevent the wood from becoming wet, to allow each coat to get thoroughly dry before any rubbing is done, and to keep the nail brushes very clean. On the whole, Staining should only be tried when the necessities of the case demand it. Painting in white, Gilding, and Ebonizing are exceptional methods, but for woods such as Oak and Walnut, oil or waxing gives a much better result than can be had from the coloured mixtures. Professional polishers, who know their work, can no doubt do much with these Stains, but for amateurs who wish to use them, the advice is-be careful.

Numerous hints with regard to Staining and Polishing have recently been given in our series of articles on Fretworking, and need not here be repeated. Instructions for fumigating Oak with Ammonia were given in No. 18.

(To be continued).

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HINTS TO YOUNG BEGINNERS.



T no time of the year is it more necessary than in the early spring to scrub and limewash all houses, lofts, and appliances. Every nook and corner should now be poked into and well sprinkled with one of the many disinfectant fluids. By this means Pigeon fanciers will

escape the many insect pests which will inevitably follow if this advice be not followed.

After mating has begun see that each pair of birds is allowed a nice secluded refuge. Give the birds plenty of crushed old mortar, and once a week it is advisable to give a weak solution of Sulphate of Iron. This will be found an excellent tonic if used in moderation; it should be given when filling the fountains or water bowls by allowing the water to run rapidly over a lump of this crystal.

This month Pigeon breeders pay special attention to feeding, and give all stock birds good nourishing food to enable them to go through the trying ordeal of a breeding season. Give them good food and, above all, with punctuality. Large breeds should have for their staple food—maple peas, tares, and beans; a little barley also makes a nice change and the birds like it. Hemp must be given very sparingly. During the very cold weather it is advisable to see that Pigeons have fresh water and a bath not more than twice a week.

To facilitate easy feeding and also to promote health salt is, no doubt, an absolute necessity. Although many breeders neglect it, it is very easy to keep a nice lump of common bar salt in a dry place, within easy access of the birds; and do not forget the grit, which the birds must have no matter what kind. Crushed red brick is capital and assists digestion; pounded oyster shells and flint grit can be easily obtained, and will pay for procuring.

Amongst the furniture in the Pigeon loft the nest pans hold an all-important place. Earthenware pans are perhaps the best. Place good Pine sawdust in them and a little chaff or chopped straw, and see that plenty of sawdust is placed around the edge, not forgetting to remove any droppings.

The first egg should be removed and kept warm, and a dummy one placed in the nest until the second egg is laid, after which the dummy must be taken away and the first egg replaced. By this means both eggs will be hatched at about the same time. Any broken eggs should be at once replaced by sound ones or dummies, so as to ensure the pairs sitting the whole time.

A capital plan is to keep a plenteous supply of four to six-inch lengths of straw or fibre, which should be strewn about within access for the birds themselves to carry to such nests as they care to make. It has been found that chaff and sawdust form the best bed, and it is not advisable to have too smooth or shifty a nest bottom, as this will cause deformities, such as straddling legs and crooked breasts, and will spoil the bird's chances for the Showpen. When the youngsters are about a week old see that the proper Conference rings are put on the birds, as even if you breed a real "clinker" it will be useless in the Show pen unless "rung." It must be borne in mind that the ring serves a double purpose-a check against fraud and an index for breeding.

The best food to tame Pigeons or to attract them to you is to throw, everytime you approach them, a few grains of hempseed; they seem to prefer this seed to nearly anything, but it must be given very sparingly, as it is really of too oily and heating a nature, but given now and then it will act as a good stimulant, especially when the breeding season is on. Other small seeds such as canary and millet are useful in the same manner, and will tempt the appetites of sick birds or those breeding; and when the youngsters do not appear to have sufficient food, a supply of small seeds will cause the parents to give them a good meal.

Remember in the selection of stock for Pigeon breeding to select the cock bird for feather colouring and adornment, and the hen for head and body properties.

If a newly-laid Pigeon's egg is only slightly cracked or chipped, and the inner skin be not broken, a bit of gummed paper should be laid over the flaw.

"Pigeon's milk" reads like a joke, but it is a reality, and the "soft food" to feed their young is usually to be found ready in their crops about two days before the day of hatching takes place.

All houses should have a second wire door, made to open inwards, so as to prevent egress and the probable loss of valuable stock.

During the breeding season fanciers should see that their birds are provided, each day in summer and every other day in spring, with green food, which it will be found they much enjoy and will peck at readily if suspended by a string.

It is courting failure to keep too many varieties of Pigeons, to feed with bad corn, or to neglect to separate the squeakers or young birds from their parents when able to fly.

It will be found that Pigeons kept confined cost a trifle over 2d. per pair per week for grain, whilst Homing Pigeons, allowed their liberty, cost about half that amount.

Those readers of Hobbies who think of starting Pigeon breeding must hurry up if they wish to get the full benefit of a season's breeding. Fix on the breed you want and get it from a reliable source, remembering, as already insisted upon, that a few pounds well spent in good fancy Pigeons often yields profitable results.

(To be continued.)

Grand French Catalogue of Fretwork Designs,

Containing over 500 miniatures of the very best Designs ever published. Post Free for 1/- Experienced Fretworkers should not be without this catalogue.

3-ply FRETWOOD Panels, 18 in. by 18 in. sq., nice figure, smooth, clean, and entirely without waste. 2 Panels for 2/6, Post Free, in the following kinds:—Bird's Eye Maple, Red Birch, White Birch, Oak, Ash, Silver Grey. A marvel of cheapness.

See our offers in back numbers of Hobbies. STAR SAWS, 1/6; LIGHTNING SAWS, 1/3; SWISS SAWS, 10D.
FOR 6 DOZEN, POST FREE.

Send 1d. stamp for Tool and Wood Lists.

HINDLEY & JONES, Fretwork & Tool Stores, NORFOLK MARKET HALL, SHEFFIELD.

Notice to our Readers.

There are, we are certain, many readers of Hobbies who would be glad to do all in their power to make the paper more widely known, and to consequently increase its usefulness. Very valuable service can be rendered by distributing specimen copies to suitable people, who only need to make the acquaintance of *Hobbies* to become regular subscribers. We shall be very glad to send parcels of specimen copies to any of our readers who are willing to help in this manner. Applications should be sent to the Publisher of *Hobbies*. Bouverie House, Salisbury Square, London, E.C.

Hobbies' Pesigns.

WING to the very heavy expense involved in the production of the Designs forming our Weekly Presentation Supplements, we cannot supply these with back numbers of Hobbies.

Copies of them may, however, be obtained on sending threepence for each Design required to the Publisher of Hobbies, Bouverie House, Salisbury Square, London, E.C.



No. 22. Pipe Rack, with Mirror and Match Box. (Presented with next week's Hobbies.

For the convenience of our readers we give below a complete list of the Designs already published.

- 1. Midget Photo Frame, with Overlay Ornament.
- "Aphrodite" Mirror Bracket. 2.
- 3.
- Bent Iron Work Gong Stand. Hanging Twine Box, with 4. Overlay Ornament.
- 5. "Card" Inkstand.
- Carved Adams Frame. 6.
- "Gasalier" Bracket. 7.
- Bent Iron Work Table Stand, for Cards, etc. 8.
- 9. Carved Lamp Bracket.
- 10. Model of a Victoria.
- "Toilet Glass" Cabinet Photo Frame. "Swing-Boat" Match Holder. 11.
- 12.
- Hanging Fretwork Calendar. 13.
- Bent Iron Work Grill Panel. 14.
- Carved Blotting Book Cover. 15.
- Prize Card Receiver. 16. 17. Panel with Overlaid Ornaments.
- Bookshelves. 18. Two Stencil Dado Bands. 19.
- Gong Stand. 20.
- Two C. D. V. Photo Frames.



CHAP. I.—MATERIALS.



HE Art of Painting on China is of so ancient a date and so varied a nature that it is scarcely within the compass of a magazine article to deal with the history of ceramic decoration—a subject tempting and vast enough to need a monograph to itself. Yet the student who would

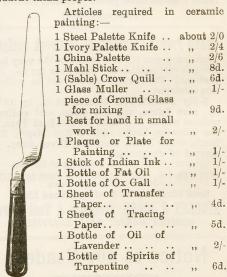
excel in any branch of the Art must necessarily feel interested in, and afford himself opportunities of studying, the past and present successes of the masters. He must acquire a thorough knowledge of their methods, gain experience in their various styles, and have an intelligent appreciation of the steps secured even by failures, which often prove of much use to him who would honestly follow in their wake. Therefore, it being impossible to meet these needs in the present course of papers, it were well if the student supplemented these practical directions for initiation into the mysteries of painting upon China with vitrifiable colours, by an earnest zeal for the study of those specimens of good work which may possibly come within his reach. Any opportunity he may have of copying a subject directly from a well-painted piece of China should not be neglected by the beginner.

To anyone attempting China Painting for the first time, or, indeed, to anyone not fully experienced in the use of ceramic colours, minute directions at starting as to the peculiarities of the paints and mediums to be used will be necessary. Attention, therefore, should be given to the following particulars, by which means endless disappointments may be avoided by the student.

In choosing the paints, and in their manipulation, it should be borne in mind that there are three primary divisions of colours, either of which may be used, but whose intermixture would prove fatal to good work; and even in a single class two colours may be found that will kill each other, or when mingled and exposed to heat will lose their properties as much from their individual peculiarities as from the application of the added bodies. Under these circumstances it will be seen that great care has to be taken in choosing the colours to be

used together, and indiscriminate admixture or juxtaposing of certain paints carefully avoided. The characteristics of the colours recommended in the course of these papers will, however, be carefully noted in their place.

For the production of good work, and the satisfaction and comfort of the artist, as in all other branches of employment, certain utensils will be required. The articles mentioned in the first of the following lists are absolutely necessary, those in the second, however, though very useful, may be dispensed with should the student think proper.



Palette Knife.

1 Needle, set in handle, for picking specks of dust or fluff off painting.

3 or 4 Dabbers of varying sizes. Several sizes of Brushes, Camel Hair or Sable.

A Set of China Colours, Pencils or Crayons, and various small Cups or Saucers to hold liquids.

List of Utensils useful, but not essential, for the beginner.

Whirling Table for describing circles or curves.

Curved Scraper.

Wire Easel for holding plaque or plate to be

Small Easel for holding work of student. Ivory Tracer. Brush Rest.



Scraper.

Palette knives of a trowel shape will be found more useful than those of the ordinary flat make-one of good flexible steel should cost from 2/- to 3/-, the ivory knife, of course, being a little more. Instead of the China palette one or two plain earthenware tiles, measuring from four to eight inches across, may be used. If colours, such as the French oil and English powder paints, which require extra grinding, are used, the tiles will be found convenient even if an ordinary water-colour palette should be made use of afterwards. The paints must in no case be left standing on the slab or tile on which they have been ground, but should be

instantly lifted with a clean knife, and transferred in isolated little heaps on to the palette. Dabbers are absolutely necessary when broad work is required. These, of course, can be purchased with all the other requisites at Art Colour shops, but the student is advised to make his own—cotton wool covered with a little soft chamois leather being a cheaper and, perhaps, more effective substitute. A hand rest, similar



Hand Rest.

to the accompanying design, may be made quite easily at home from a little thin wood, all that is essential in its construction being neatness and firmness, and that it should be sufficiently high—say from 2 to $2\frac{1}{2}$ inches—to raise the hand which it is intended to support just clear of the edge of the object to be painted. For larger work, which must stand upon the table easel, or the ornamentation of vases, &c., a mahl stick, furnished with a light bamboo handle, and purchasable at 8d. or 1/-, must be used.

The brushes to be employed in painting upon china or porcelain need not be very numerous, four or five different sizes of either sable or camel hair being all that are necessary for the beginner, with the addition, of course, of the crow quill liner (sable), a softner of badger hair, and the dabblers. In choosing all brushes for ceramic painting care should be taken that the hairs are all of the same length, and will square or point easily as their nature demands. this end any brushes in use must be trained carefully after cleaning, or they will get into a slovenly habit and occasion much discomfort in working. If camel hair, the cost of the brushes will be but small, running as they do from 2d. to 5d. or 6d. each, according to size. White goats' hair begin at 2d. also and move upwards, a full-sized goose quill costing about 7d. Sables, of course, are better than camel's hair for painting in oils, but they are much dearer, and

to the student who has to learn their manipulation, when using vitrifiable colours, they are, perhaps, unnecessarily expensive. The crow quill for tracing fine lines should, however, be sable, and the dabbler, if not made at home, should be of the same material, flat or askew topped. These last, about the size required, will cost from 1s. to 2s. 6d. The softner of badger hair is very useful.



Brush Rest.

The plaque or plate mentioned in the list will cost about 1s. For this price one measuring 7 inches in diameter may be bought, glazed on both sides. The amateur in selecting earthenware or china for firing must be particularly careful to obtain it free from imperfection, a "crazed," flawed, or even "soft "glazed plate rarely allowing satisfactory work to be produced. In the latter case the glaze when melted will bubble over and produce a nutmeg grated kind of surface to the finest work. China having salt in any part of its composition is liable to break in the oven. For the excellence of their quality and beauty of finish essential for China Painting, Minton's glazed earthen-ware tiles will be found satisfactory. They can be purchased from 4d. each in white, brown, or buff. Their beautiful turquoise and pea-green tiles, the former double the latter, treble the price of the white, will be of use to students who have not yet learned to lay in flat grounds. They are especially made to fire well.

(To be continued.)

Terms of Hubscription

Three Months (inc	luding postage)	 	8.	8
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TERMS FOR ADVERTISEMENTS.

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DISCOUNT ON A SERIES OF INSERTIONS. -:0:-

All Communications to be addressed to the Sole Advertisement Agents,

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Tobacconists Commencing. See Illd. Guide & Catalogue. (259 pgs.) 3d., "How to open a Cigar Store, £20 to £2,000."—Tobacconists' Outfitting Co. (Reg.), 186, Euston Rd., London. N.B.—Shopfitters and showcase makers for all trades. (Over 50 years' reputation). Mgr. H. Myers reputation.) Mgr., H. Myers.

Our SUPPLY DEPARTMENT.

ITS VALUE TO COUNTRY READERS.

last week's issue of Hobbies we announced our intention of organising a Supply Department, through the medium of which we propose to act as general agents for all readers who may have need of our services. Most people living in London are accustomed to executing occasional commissions for country friends. The latter, for example, want some article which they cannot well obtain in their own neighbourhood, and they therefore ask some friend or relative in London to purchase it and send it to them. Or it may be that they see something advertised in a newspaper or trade catalogue which they would like to buy if they were certain it would prove all that the advertisement represented. So they ask their London friend to see the article in order that they may have an independent opinion of its merits. propose to take the place of this friend for all our readers who may care to entrust us with their commissions.

This duty will be discharged not merely without expense to the purchaser, but the Hobbies Coupons will in all cases be accepted as part of the purchase money, under the conditions explained on each copy of our Presentation Design. This will in itself be equivalent to a discount of five per cent. on every bill. We shall, of course, endeavour to get this discount allowed by the firms from whom we obtain the goods, but in cases where this proves impracticable the Supply Department will itself bear the loss. There will probably be no difficulty in making good this loss in another direction, for, owing to the extent of its purchases on behalf of the readers of Hobbies, the Supply Department will no doubt in many instances succeed in obtaining goods at a considerable reduction from the ordinary retail price. In such cases the transaction would show a profit which would be shared between the Department and the purchaser. It will be noted that we do not claim to be actuated solely by philanthropic motives; our chief object is, undoubtedly, to be of real service to ou . readers, but we anticipate that the plan we suggest will greatly increase the circulation of Hobbies, and consequently prove of advantage to ourselves. Moreover, although in many purchases

we shall sustain an actual pecuniary loss, we expect, as already intimated, to secure in numerous cases very considerable discounts, thus making profits which will be shared with the readers on whose behalf the purchases are made. We anticipate that our share of these profits will not only compensate us for the loss on the first class of transactions, but will in time go far towards meeting the very heavy expenses which the working of so comprehensive a Department will entail.

We do not wish to place any restrictions on the nature of the commissions we are willing to undertake. We will obtain any article which a reader may see advertised in any magazine or catalogue, or we will select and forward any goods to be purchased from London manufacturers or tradesmen. Our readers will have, without charge, the benefit of the independent judgment of experienced buyers, and in many cases we should, as we pointed out last week, be able to place at their disposal the advice and practical assistance of highly qualified experts. The value of such assistance to an inexperienced buyer of photographic apparatus can hardly be exaggerated, and we shall be only too pleased for our readers to avail themselves in this way of the knowledge and experience of the various members of our staff. Photographic Apparatus, Magic Lanterns, Cycles, Musical Instruments, Athletic Sundries, Tools and Materials for all kinds of Home Work—these are but a few of the articles in the purchase of which expert knowledge is desirable, and the sphere of usefulness of our new Department has practically no limit.

Every reader of Hobbies will therefore, as we pointed out last week, have at his disposal the best possible advice on all subjects coming within the scope of the paper. He will have at his service the independent judgment of a practical business man upon any article which he may wish to buy, and, if he desires, such article will be bought for him in the cheapest market and sent securely packed to any address. He will obtain these advantages not only absolutely free of charge, but by the operation of the Hobbies' Coupon scheme he will actually obtain the goods at a lower price than he could buy them for himself. Moreover, in many instances part of the purchase money he has paid will be refunded, for he will be entitled to a share of the special discount which our large transactions will often enable us to obtain. We invite every reader who wishes to take advantage of our new scheme, or who may have any suggestions to make on the subject, to write to-The Manager, "Hobbies" Supply Department," Bouverie House, Salisbury Square, London, E.C.

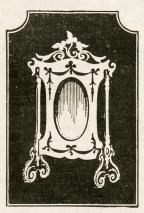
Our Weekly Presentation Design.

No. 21. Two C. D. V. PHOTO FRAMES.



HE two small Photograph Frames given away with this number are simple to cut, and do not require much description beyond that which is given on the diagram sheet. Solid or Threeply-wood of almost any variety can be used, and a thickness of $\frac{1}{6}$ -inch will be sufficient. The Overlay ornament on the Frame shown below should not be more than $\frac{1}{16}$ inch thick. Wellmade glue will hold the Supports firmly in position, and nails need not be used. The articles might be polished, but will look as well plain,—better in fact, if they are cut of white wood.

In the selection of wood, a very attractive contrast would be Pencil Cedar and White.



[Additional copies of the sheet containing these two designs may be had, price Threepence, from the Publisher of Hobbies, Bouverie House, Salisbury Square, London, E.C. The Presentation Supplements will be given during the current week of publication only, and will not be supplied with back numbers of Hobbies.]

Photographic Hints A for Amateurs.

APPROXIMATE WEIGHTS-USEFUL COINS.

Half-a-Crown	200	grains	14 gr	ammes
Shilling	80	,,	5.1	,,
Sixpence	40	,,	25	,,
Threepenny piece	20	,,	1.2	"
Penny	146	,,	9.5	"
Halfpenny		1)	5.6	"
Forty-eight pence 7	,000	,,	1 lb. avoi:	rdupois
Three pennies	437	,, 1	OZ.	"

These will all be found useful in the absence of proper weights when making up developers, etc.

AN AMERICAN FIXING BATH.

The following formula for an acid fixing bath if properly made up will keep clear for an indefinite period, and clear the shadows and harden the film at the same time:—

Нуро	 16 ozs.
Sodium Sulphite	 2 ozs.
Sulphuric Acid	 30 to 50 minims
Chrome Alum	 4 drachms
Warm Water	 64 ozs.

To make up dissolve the sodium sulphite in 8 ounces of the water, mix the acid with 2 ounces, and add it slowly to the solution of sodium sulphite until there is a smell of burning sulphur. Dissolve the chrome alum in 8 ounces of the water, the hypo in the remainder. Add the acid solution to the hypo, and then the chrome alum solution. Well mix, allow the bath to stand for a few hours, and then filter for use.

PRECAUTIONS AGAINST DUST.

When keeping plates avoid a room where dust is in the air.

Keep the plates covered up as much as possible both from dust as well as light.

Dust out the dark slide before inserting the plates, and go into all the corners, drawing the shutter out to the full extent.

Dust out the inside of the camera when extended the full draw of the bellows, first with a dry cloth and then a bit of clean rag with the smallest quantity of glycerine.

When the plates are put into the double backs, in the dark room, of course, get as far away from the light as convenient, turn your back to the light, draw out the shutter, holding the plate downwards, and gently go over its surface with a wide soft hair brush, with gentle downward strokes in one direction only.

Before developing, use the brush again and go over the film of the plate in order to remove any dust that may have settled on it after exposure.

When carrying the camera and slides along a dusty road keep them covered up as much as possible. Dust will find its way through the finest grooves.

The rough edges of the plates themselves, working about in the rebates, will grind out some fine sawdust.



A Philatelic Causerie by Percy C. Bishop,

Joint Editor of the "STAMP COLLECTORS' FORTNIGHTLY;" Ex-Editor of "THE PHILATELIC JOURNAL" and "PHILATELIC REVIEW OF REVIEWS;" General Secretary of the LONDON PHILATELIC CLUB.

THE NEW FRENCH STAMPS.

HE forthcoming issue of French stamps which, by the way, may be out before this article is in the reader's hands, will be a triumph of art. To say that they will be the most artistic stamps France has ever had is not to venture a very daring statement, for hitherto the stamps of La Belle France have been most unbeautiful. The design for the new stamps, of which a greatly enlarged illustration is given here, is the work

Mons. Grasset, an eminent French artist specially commissioned to the work by the French Government. Such is the delicacy of Mons. Grasset's design that two successive printings will be necessary for its production,—one for the deep shades and another for the soft. This is a drawback in one way, for experience has shown that the duplication of printings almost invariably leads to frequent errors of execution; but there is no doubt that the result will be a stamp worthy of the artistic traditions of the French race. The cost of engraving will be heavy, an intricate steel process being used, but this will be compensated for by the fact that forgery will M. Grasset's Design for New French Stamps be practically impossible.

The Figaro, of Paris, in an interesting article concerning the new stamps, states that the gross cost of production, despite the double printing, will amount to only 80 centimes (8d.) per thousand stamps.

So soon as these beautiful new stamps are seen in this country I venture to prophesy that there will be a great public outcry against our miserably inartistic English stamps. Stamp collectors are agreed that it is high time we had an issue of stamps to which we might, as a

-:0:-

nation, point with pride, and doubtless the general public will in time come round to the same way of thinking. -:0:-

From America comes a proposal which I hope will be speedily squeiched. A Mr. Pugh, representing Kentucky in the American Congress, has prepared a Bill to permit American cities of 100,000 inhabitants to issue postage stamps of special designs, in commemoration of the history of such cities, or in perpetuation of the memory

of distinguished citizens. Now, one need not reflect long to realise the appalling possibilities that this scheme opens up. There must be at least a hundred cities of 100,000 inhabitants in the United States. Should only half of them avail themselves of this proposed privilege, the long-suffering American Philatelist would be at once confronted with 50 new and distinct sets of stamps. Allowing the same number of values for each city's issue as are included in the present national issue, would be 600 new varieties created at one fell swoop. I am in ignorance as to the details of Mr. Pugh's scheme. I do not know, for instance, whether these distinguished citizen

stamps would be mere locals, or whether they would frank letters to foreign countries. Against this latter contingency the Postal Union would probably have something to say. Naturally such an innovation would not only be confusing to the general public, which I suppose should be the first consideration,) but would plunge the honest Philatelist into endless difficulties. Perhaps the whole thing is a somewhat heavy joke on the part of Congress-man Pugh, but the American papers treat it seriously enough, and many American Philatelists appear to be in a fever of uneasiness.



PLATE NUMBERS OF ENGLISH STAMPS—Concluded.

THE TWO SHILLINGS

is a value soon disposed of.

Plate 1 is found in three shades of blue, all of about the same degree of rarity.

Plate 3, blue (plate 2 was never issued) will be worth about £25 to its lucky finder.

Plate 1, red-brown, is a stamp which is now valued at about £2 10s. used, £7 unused.

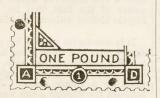
All the two-shilling stamps have the spray watermark.

THE HIGHER VALUES,

5s., 10s., and £1, need but little description.

Of the Five Shillings, rose, plates 1 and 2 watermarked Maltese cross, and are of about equal value. Plate 4, if a specimen is ever found with this watermark, will be worth large sum. Plate 4, with anchor watermark, is a good stamp, worth from 10s. to £1 according to condition.





Of the Ten Shillings there is only one plate number, plate 1, which exists with both Maltese cross and anchor watermarks. With the former it is worth about 10s., with the latter more than double that sum.

The One Pound stamp, like the 10s., has one plate number found with both Maltese cross and anchor watermarks, and in this case also the anchor watermark is by far the scarcer of

I have brought these notes to a conclusion somewhat quickly—perhaps with some perceptible abruptness—because I have a quantity of other interesting matters to find room for. Nevertheless I have been surprised and delighted at the amount of interest in English stamps aroused among the readers of Hobbies by means of this brief guide to plate numbers. -:0:-

NEW ISSUES OF STAMPS.

a*s Items for this department will be gratefully received from any Philatelic readers who happen to receive early information of new issues, or of impending changes in the postal arrangements of any country.

Bulgaria is said to have issued a special stamp bearing a portrait of little Prince Boris, and intended to commemorate the conversion of the baby prince to the Orthodox Church.

ECUADOR, while yet flushed with its virtuous resolve to issue no more stamps that are open

to a suspicion of being issued specially for collectors, announces yet another commemorative issue, this time to immortalise the happy day when the gallant Ecuadoreans expelled a Government which dared to cast some trifling slur upon the spotless banner of the State! The happy day in question was June 5th, 1895; and on that same day in this year the commemorative stamps will make their appearance.

GREECE, after the issue of its special Olympic Games' stamps, will go in for an entirely revised

edition of its ordinary issue.



Honduras.—Can it be that this Central American Republic has abandoned its contract with the Hamilton Banknote Company, of New York? The new stamp just to hand is palpably of home manufacture. It is a rough lithograph, and its execution forms a

startling contrast to the beautiful stamps supplied to this and other Republics by the Hamilton Company. The value is 10 centavos, the colour red.

PERU has a complete new issue in preparation, of which the following is a descriptive list:

1c. Ultramarine, portrait of the Inca Manco Capai.

2c. Prussian Blue, portrait of the Inca Manco Capai.

5c. Indigo, portrait of the Inca Manco Capai.

10c. Yellow, portrait of F. Pizarro.

20c. Orange

50c. Rose, portrait of Gen. La Mar. 1s. Vermilion ,, ,,

2s. Carmine Off. 1, 10, 50c., surch. "GOBIERNO."

Wuhu, in China, has produced a new set of locals. I I have thought it worth while to give an illustration, but, of course, the stamps are mere locals that will not repay collecting. There seems to be a different central design for each value. The set comprises nine stamps.— $\frac{1}{2}$, 1, 2, 5, 6, 10, 15, 20, and 40c.



(To be continued.)

STAMP COLLECTORS



Should send 1d. Stamp to HARRY HILCKES & Co., Ld., 64, Cheapside, London, E.C., for "Specimen" copy of Stamp Collectors' Fortnightly. Contains articles for beginners, as well as for advanced Collectors.

THE BEST STAMP PAPER COINC!

POREIGN STAMPS.—Take your choice—GRATIS.
—Set of 4 Italy (Segnatasse), 1, 2, 5, and 10 lire (cat' at 2/5); or, Set of 3 Italy (Segnatasse) 1891, Provisionals (cat' at 2/6). Either ONE of above valuable sets presented GRATIS to every purchaser of our "February" Packet, containing 91 different stamps. Seychelles Provisional (rare), Herzegovina (new), Guatemala, Gibraitar, Jamaica, Straits Settlements (scarce, surch.), Canada Law Stamp (large), Hong Kong, Cape 1/- (cat' at 6d.), Congo Free State, Bolivia, Gold Coast, Peru, Grenada (rare), Chill, Sirmoor (elephant), set of 3 Chili Telegraph, &c. Free 1/1. Selections sent on approval, liberal discount. Collectors' or Dealers' Lists Free.—FISHER, TITLEY & Co., Stamp Importers, Bath.

How to Ride a Bicycle.

HINTS TO BEGINNERS.

VERY large number of people made their first attempt at cycling last season, but if the prophets are to be relied upon 1896 is to be, par excellence, the novices' year. It is also to be the ladies' year. The latter fact we gather, not so much from the irresponsible guesser at futurity, but from the large amount of hard cash which the numerous cycle manufacturers have already paid down in order that they may be ready to meet the great demand for bicycles for ladies which they anticipate.

For all this the cycle manufacturers have to thank that relatively small class of people which is commonly called "Society." Society, for some unexplained cause, suddenly decided to ride a bicycle. The result was that hundreds, if not thousands, of people who always take their cue from this quarter determined to go in for cycling also. All at once cycling, from being the most despised of all pastimes, burst into popularity and was regarded with the highest favour. No doubt a large number of people who first cycled because it was the fashion, are now riding, or intend to ride, because they can see what a splendid thing the wheel is.

The cycle of to-day is a very different machine to what it was a decade ago. With air-shod wheels we now glide along smoothly and noiselessly at a speed which in the old days was unheard of, and we gain that speed, thanks to gearing, with a slower and therefore more suitable leg motion. The fastest time ever done for a mile on the old machine was 2 m. 29 secs., while to-day the accepted record is 1 m. 52 secs. Years ago 20 miles in the hour was considered a wonderful performance, and something over 21 miles in that time was record when small tyres and high ungeared wheels were in vogue. Over 29 miles have now been done in the 60 minutes, and the much coveted "30 in the hour" is considered to be at the mercy of the first really high-class rider who makes the attempt on a favourable day and under the best possible con-

Nowhere, however, is the difference between the new machine and the old more marked than in the learning. To struggle on to the top of a high machine, and from that elevated position to learn to get the balance and keep one's seat at the same time was no easy task. In fact, riding bicycles in the "eighties" was an acquirement which none but the male sex would tackle. Then again, no old-time rider could make much of cycling until he had had some steady practice (which generally included a fair proportion of croppers) for say six months.

The cycle of to-day is open to almost everyone. Instances are on record of children of three or four years of age and veterans of 80 actually learning to ride it. Any ordinary person can acquire the balance in a few lessons at the most. Some people ride straight away. This is largely a question of nerve and con-

fidence. The theory of the balance is this: the machine and rider form one body which is in unstable equilibrium. To prevent the whole thing from falling flat on its side it is necessary to have motion, and it is also necessary that the centre of gravity of the body should exactly cover the point of contact with the ground. If this centre of gravity gets to one side of the centre line or to the other the whole body will fall over sideways, unless the fault is corrected. To regain the balance it is necessary to turn the steering wheel to the side on which the collapse is threatened. This action causes the machine to run under the rider so to speak, and the centre of gravity is thereupon shifted over to the other side to such an extent that a fall is threatened there; the wheel is then turned back again and the process may be continually repeated, and indeed the riding of the first beginner is generally seen to be, just what it actually is, viz., a series of threatened falls and recoveries.

When the novice has become a little more expert the wild plunges to right and left which he makes with his steering wheel become turns of an inch or two only. Then he begins to find that he can do as much with his body as with his wheel; this gives him confidence and he rides a little faster. Like a top, the faster the bicycle goes the easier it is to balance it, and after a few trials the novice suddenly becomes aware of the fact that he can balance his bicycle almost without thinking about it.

It is wonderful what a big sideways shock an expert rider can stand when he is prepared for it. We once saw a man ride, without recognising where he was going, right across a cricket pitch on a village green. Just as he crossed between the wickets a run was in the very act of being made, and the rider was charged full tilt and broadside on by one of the batsmen.— Leaning well over the the cyclist was not only successful in retaining his seat, but he managed to ride away as if nothing had happened, while the budding Grace measured his length on the turf.

In learning to ride it is very much better to get the assistance of a friend who is a cyclist than to attempt the task unaided; and learners might bear in mind this fact—that the teachers' work is very hard, so some mercy should be shown whether one's assistant is paid or is a friend. A wide level road is a much better place to learn on than a comparatively small room or school. The learner should have his seat set low, lower than he will want it when he can ride properly. The advantage of the low seat in the first instance is that the novice has his feet within easy reach of the ground, and he gains confidence (the great essential to early success) thereby. The rider should then bear in mind our remarks on the theory of the balance and endeavour to do without the help of the assistant as much as possible. Hold the handles firmly, yet not rigidly, and remember that while the attendant is holding you up you are making no progress whatever. As a rule two or three bold attempts on one's own account will teach the rider what can never be taught on paper, that is, "how to do it." Once acquire the balance, and the first and worst stage of the novitiate is over.



Every month we give a prize of Ten Shillings for the best Photograph, and Five Shillings for the second best. Subject for this month— "Landscape and Seascape." The print may be by any process, and from any sized negative up to "whole plate." Photographs cannot be returned, and we reserve the right to reproduce any of them in *Hobbies* if thought desirable. Photographs for this Competition must be sent to our office not later than March 31st, marked " Photograph."

Bent Iron Work.

For the best BENT IRON WORK GRILLS, made from Presentation Design No. 14, we offer one Prize of a GUINEA, and one Prize of HALF-A-GUINEA.

All matters relating to the actual work, i.e., width of metal, method of fixing, etc., are left entirely to Competitors, and the awards will be given to those examples which shew the best general work.

Every Competitor should write his or her name clearly on a label which must be attached to the Grill

All Grills sent in for Competition will be returned if desired, and for this purpose fully stamped and addressed labels must be enclosed. In no case can articles be returned unless sufficient stamps are sent.

Articles should be marked "Grill," and must be received at our Office not later than March 31st.

Fretwork.

For the best FRETWORK MODEL of a VICTORIA, made from the Design presented with Hobbies No. 10, we offer Two Prizes:-

First Prize-An "IMPERIAL" TREADLE FRETsaw, with Superior Tilting Table for Inlay Work, Vertical Drilling Attachment, and all Modern Improvements.

Second Prize—A Finely Finished Treadle Fretsaw, with Nickel-plated Tilting Table, Emery Wheel, etc.

The choice of wood, method of cutting, and all matters relating to the actual work are left entirely to the Competitor. We would strongly urge, however, that all Articles should be left plain, and that no polish, varnish, stain, or paint of any kind be used.

Every Competitor should write his or her name clearly on a label which must be attached to the Victoria itself.

Articles sent in for Competition will be returned, and in every case it must be stated clearly whether they are to be sent back by post or rail. If by post, sufficient stamps must be enclosed, and these should be affixed to the addressed label. If returnable by rail, the name of the nearest Railway Station must be clearly given be clearly given.

As the work of unpacking and repacking these Fretwork Articles entails a great amount of labour, we must ask Competitors to adhere to our rules and suggestions as closely as possible.

All Articles sent in for Competition should be marked "Victoria," and must be received at our office not later than March 31st.

Wood Carving.

For the best CARVED BLOTTING BOOK COVERS, made from Presentation Design No. 15, we offer Two Prizes:—

First Prize-ONE GUINEA. Second Prize—Set of Twelve Superior Carving Tools.

The choice of wood and method of carving and finishing are left to Competitors.

Only one side of the Blotter should be sent, and the Carving should not be made up in book form.

Every Competitor must write his or her name clearly on a label which should be pasted to the back of the

Articles sent in for Competition will be returned if desired, and for this purpose fully stamped and addressed labels must be enclosed. Blotters cannot be returned unless sufficient stamps are sent.

Articles should be marked "Blotter," and must be received at our office not later than April 30th.

Notice to Competitors.

All Articles, Sketches, etc., for Competition should be addressed to the Editor of Hobbies, Bouverie House, Salisbury Square, London, E.C. The name and full address of Competitor must in every case be sent.

Note:-No correspondence can be entered into with Competitors, and all awards made will be final.

Hints on Hobbies. _11_

IMPRESSIONS OF LEAVES ON SILKS, SATIN, PAPER, ETC.

Prepare two rubbers of wash-leather, made by tying up wool or any other soft substance in the leather. Then prepare the colours which it is wished the leaves shall be. To mix the colours rub up with cold drawn linseed oil—indigo for blue, chrome for yellow, &c. Procure a number of leaves of the size required, and dip the rubbers into the paint and rub them over one another so that there is not too much of the composition on the rubber. rub them over one another so that there is not too much of the composition on the rubber. Place a leaf on one of the rubbers and damp it with the other; take the leaf off and apply it to the substance upon which it is to be impressed. On the leaf place a piece of paper and rub it gently, and there will be a beautiful impression of all the veins of the leaf. A leaf only can be used, and as far as possible the leaves should be of the same kind and of the same size. These impressions look well on black silk or satin, and will make a very pretty ornamentation for the cover of an occasional table.

OAK TREES IN A HYACINTH GLASS.

OAK TREES IN A HYACINTH GLASS.

Very graceful little trees may be grown from an acorn germinating in a hyacinth glass. Take such a glass or a broad-mouthed bottle and fill it about one-third full of water. Cut a piece of stiff cardboard or tin to fit closely the top of the glass or bottle, and from the centre suspend an acorn by a piece of thread just long enough to allow the acorn to descend nearly to the water. Keep it now on the mantelpiece, and if there is generally a fire in the grate the acorn will germinate in a few weeks and burst the shell; a tiny root will appear and descend into the water, where it will develop. Soon afterwards another germ will be seen to strike upwards until it reaches the covering of the glass, where it must be allowed to escape into the air, and the acorn still remains in suspension, and thus an oak sapling may be raised in the dining-room. If the shell were broken and the kernel of the acorn suspended it would soon become mildewed. It is well to steep the acorn in water for 24 hours or so before suspending in the glass.



CHAP. XIX.—FRENCH POLISHING, Continued.

CUTTING POLISHED WOOD.



EFORE dealing with the application of French Polish to fretted articles, it may be well to give a few suggestions 8.8 to the method of cutting polished wood.

Naturally the greatest care must be taken, as everyone knows how easily a bright surface is scratched. No idea can be entertained of transferring or pasting the Pattern to the wood itself; the polished wood must be cut in such a way that its surface

will not require to be touched afterwards. To take a simple example by way of illustration:— The accompanying diagram, Fig. 94, represents a small Bracket which is to be finished with French Polish, and as a high gloss is desired, it has been decided to polish the wood before cutting out the article. Select a piece of wood

which is of sufficient size to include the whole Pattern, and Polish it in the manner described in last chapter. This done, take a bit of waste wood as thin as possible—and either paste down or transfer the Design to it. Lay this on the polished wood, with a sheet of soft tissue paper between, and nail or screw firmly to-gether. The nails, needless to say, must be driven into the parts which will afterwards be cut out. It is of the greatest importance to have the two boards very firmly fixed, as the Saw-blade would otherwise have a tendency to leave a ragged edge on the lower piece.



Fig. 94.

Naturally, in the cutting, those spaces which contain nails or screws should be left till the last. Great care must be taken in sawing out the final piece which unites the two boards, as any twisting or shaking may scratch the Polish. Separate the woods carefully, remove the tissue paper, and-if all has been done well-the Fret will be in perfect condition.

The work, however, is not yet done. All the edges are still unpolished, as are also the reverse sides of the two shelf-supports. The under-side of the shelf itself might be polished, but this is seldom necessary. The edges need only be stained; this may be done with the French Polish, or with Oil, but in either case the amateur should be cautioned against letting any find its way on to the surface of the wood. A little more attention can be paid to the outer edges, and with the front edge of the shelf some rubbing up might be tried.

To polish the reverse sides of the two Supports is a more delicate task, as care must be taken not to destroy the surface already finished. As the method comes under "Polishing Fretted Surfaces," it will be described presently.

Where a Fretwork article is to be viewed from front and back, it is desirable to have both sides of the wood polished. This does not entail much more trouble, but considerably more care is required. When the reverse side of the board is being rubbed, the polished surface must be well protected by having a piece of soft cloth or paper underneath. Even then it is better to have the corners nailed down to the bench, lest a sudden jerk should produce a scratch. To cut out the panel, a piece of waste wood must be screwed below as well as above, with tissue paper between them. It is difficult to prevent the under side from having a ragged edge, but if the three pieces of wood are screwed closely and firmly together, the chances of this will be reduced to a minimum, and any shreds can be removed with a file.

POLISHING FRETTED SURFACES.

Probably this method is adopted more frequently than the other, and for many articles it is more suitable. Each piece of wood, when cut out, must be made perfectly smooth with glasspaper, and only when this is done to complete satisfaction should the polishing be commenced. The initial stages are similar to those described in the last chapter, but in this case the edges should be dealt with first. Some workers use ordinary Spirit Varnish for their edges, and if it be used sparingly, it will often be found effective;

some, as we have already said, use Oil, and others the genuine French Polish. In the case of Polish it is simply a matter of rubbing in,

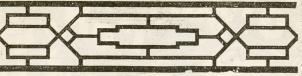


Fig. 95.

and "faking," to gain as good an effect as possible. Some of the edges it is impossible to reach except with a brush, and with these the amateur can only do what is possible, and no more. Where rubbing can be done it should be done, and greater attention should always be bestowed on the more exposed edges, as it is desirable that they should be as bright as the surface.

When the edges are thoroughly dry, both sides of the Fret may again be sand-papered, so as to remove any stains of wood. This done, the article should be brushed with some soft hat brush in order to remove every vestige of dust. The Polish



Fig. 96.

is applied as before, -so far as the Pattern of the Fret will admit. If the Design is of a Chippendale style, after the manner of Fig. 95, the rubber can hardly be given a circular motion, but with a well-filled panel, such as Fig. 96, the usual plan could be tried. What must chiefly be guarded against is catching the rag on some sharp point, and—in all probability—breaking a piece off. Polishing, in this respect, is often more aggravating than sandpapering, and many are the expressions of disgust wrung from the worker as a leaf or twig is

suddenly loosed from its moorings. As every variety of Fret would have to be Polished in different way, it perfectly apparent that a

definite rule cannot be laid down. After the first few trials, the amateur will himself see what is possible, and what impossible, and will be able to work accordingly.

As the progressive stages of the work have already been described in the previous chapter, they need not be repeated. The final stage, that of "spiriting," will be found the most difficult. The worker constantly feels that he requires elbow room, and elbow room is just exactly what he cannot get. After all, there are few pieces of Fretwork where he is unable to get a "grip," and with a short, quick stroke with the Spirit rubber, a polish should soon be obtained. Often it will be necessary to take the article in the hand, and hold it sideways and endways in order to get properly at it. It is purely a case of "working up," and only the general rules of polishing can be followed.

Polishing should certainly be learned by every Fretworker, and after he has made some preliminary attempts at it he should endeavour to find his way into some furniture store or cabinet-making warehouse, where he might see practical polishers at their work. A few lessons from a practical man would be of immense value, and if the amateur were at all of an inquisitive nature he might secure many valuable hints by putting some pointed queries.

(To be continued.)

MAGIG LANTERNS & The best and cheapest house for the purchase (hire or exchange) of lanterns and slides. Walter Tyler, 48, Waterloo Road, London. Walter Tyler's new pattern helioscopic lantern is far superior to any other lantern at the same reasonable price. The demand has been so great that new machinery has been made for their production, and helioscopics can now be delivered on receipt of order. Walter Tyler, 48, Waterloo Road, London. Oxygen and hydrogen of the very best quality, compressed, in thoroughly tested and annealed cylinders, at a much cheaper rate than any other firm can supply. Special low terms for large consumers. Walter Tyler, 94, Waterloo Road, London. Selling off a large quantity of second-hand single biunials and triple lanterns. Call and inspect immense stock. 50, Waterloo Road, London. Hire department is perfect. Best quality slides lent on hire cheaper than any other house. Walter Tyler, 48, Waterloo Road, London. Walter Tyler's new catalogue, upwards of 500 pages, fully illustrated, now ready, post free, 12 stamps; smaller catalogue, 6 stamps; and second-hand lists, post free. Walter Tyler, 48, Waterloo Road, London.

WALTER TYLER,

48 to 50, and 94, WATERLOO ROAD LONDON S.E.



** All communications to be answered in these columns should be marked "Correspondence," and must be addressed to the Editor of Hobbies, Bouverie House, Salisbury Square, London, E.C. In no case can we reply to enquiries by post.

ELECTRICITY.

- R. M.—The sample you sent is lead foil and may be used for making the accumulator described in *Hobbies* No. 1.
- LITTLE BILLEE.—The proportions of the chemicals for the accumulator are one part Sulphuric Acid to four parts
- watere J. Salmon.-Salmon.—You should be able to procure Leclanché cells from any Electrical stores. We may have an article on the subject you mention before long.
- C. SMITH.—The battery described in Hobbies No. 10 is a very powerful form of Chromic Acid cell. We do not know where you can obtain the cell ready made, but you can obtain all parts from the firm mentioned to T. Howarth, price 4/-
- T. Howarth.—For working the "Electric Lady," described in Hobbies No. 8, a 6-inch by 4-inch coil should be used, price 10/6. Four Bichromate Batteries may be required, two at a time being used; price of each, 3/- No. 20 G.P.C. wire should be used for connections. You can obtain all the necessary materials for this class of work from Gordon, 98, Charing Cross Road, London; or the Manager of our Supply Department will be pleased to get them for of our Supply Department will be pleased to get them for VOII.

FRETWORK, CARVING, &c.

- B. ELLIS.-You can send in as many Victorias for competition as you please.
- S. H. B.—We are extremely sorry to disappoint you, but it was neither you nor your brother who obtained an honourable mention in our Junior Fredwork Competition. The Walter Brightman referred to hails from Holbeach in Lincolnshire. We are glad, however, to be able to commend your work.

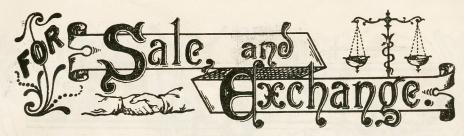
PHOTOGRAPHY AND LANTERNS.

- P. B. (Belfast)—We know nothing of the firm and could not therefore advise you to purchase of them. They are offering far more than they can afford, if the apparatus is any good, to sell for 10/6.
- H. BERRY.—The material required for photographing on tin (ferrotype) may be bought of Mr. Jonathan Fallow-field, Charing Cross Road, London, W.C. If you write him he will give you all particulars.
- FRANK HOLMES,—"Jack" is very good; it would have been well if the foreground had been a little more defined, and you should have had a perfectly plain and neutral-tinted background. The portrait of the pug is splendid, but the surroundings spoil the print as a picture.
- C. MORELAND .- Your work is highly creditable; the lighting of all your subjects leaves nothing to be desired; printing has been carried a little too far. We are surprised and pleased to find a man who works 11½ hours a day in a foundry who has such a love for his Hobby as to be able to turn out such first class Photography.
- A. N. Fish.—You had better start with a 4-plate kit such as advertised by Skinner & Co., in Hobbies. You may get all you need to make a start for 21/- When you have bought your apparatus, or before, get a copy of Elementary Photography, by John Hodges. You can buy this of any photographic dealer, or our Publishers will send you a copy for 1/3, post free. A. N. FISH .-

STAMPS.

- W. J. K.—Quite right, the stamp is Spanish and belongs to the issue of 1874. The 50c. value is catalogued by Gibbons at 1/- unused, 6d, used.
- J. W. O. (Manchester)—The stamp lettered "Stamp Duty, N. Z., One Penny," is not English at all, but belongs to New Zealand, and is worth only one halfpenny.
- J. B. W. (Wigan)—None of the Liberian stamps are of any great rarity. But what do you mean by "Liberia, one cent., white"? Surely there is some error of description here?
- CONSTANT READER (Old Trafford)—For "a cheap list of all stamps issued up-to-date" we can recommend Bright's A.B.C. Catalogue, just published at 1s. 9d., post free, by Bright & Son, The Arcade, Bournemouth.
- N. W. G. (Norwich)—The standard work on the detection of forgeries of stamps is "Album Weeds," by Rev. R. B. Earée, published at 10/6 by Stanley Gibbons, Limited, 391, Strand, London.
- W. S. (Maidstone)—Very few collectors go in for fiscal stamps. You might be able to obtain some advice as to the disposal of the large quantity you possess from Mr. Walter Morley, 186, West Green Road, Tottenham,
- J. S. C. (Westhoughton)—Your Belgian stamp belongs to the issue of 1869, and is one of the very commonest stamps of this country. Probably you would find some difficulty in selling it for a penny. Don't hesitate to write when there is anything you wish to know.
- A SUBSCRIBER (Pentewan) .- None of the stamps you describe are worth more than one penny each. As a general thing only the high values of United States' stamps attain high prices in the Philatelie market. The 1, 2, 8, 4, and 5 cents, stamps of all issues are very common.
- H. A. C. (Brighton)—The difference between the two varieties of the current English penny stamp is to be found in the number of pearls in the border at each angle. In the earlier specimens these pearls number only 14; in the present stamps there are 16.
- J. M. W. (South Shore)—The "5 cent. triangular Liberia, unperforated, unused, surcharged 'O.S.,'" is worth 3d.; the "round" United States' stamps, 2 cents., eagle and two heads, is cut from an envelope of the special Columbus Centenary issue of 1893. You should have preserved the entire envelope; the stamp alone is worth next to nothing.
- nothing.

 L. C.—Your 1 cent. and 5 cent. Novia Scotians, being nice specimens, are worth 9d. and 6d. respectively. Of the U.S.A.'s you send me, the 10 cents. "Special Delivery," blue, is worth 4d.; the 10 cents. Special Delivery, orange, 3d.; the other American is a fiscal, worth nothing. The "lady's" head on this last mentioned stamp, which you have taken for the head of some Lady President of the States, is merely an allegorical profile typifying Liberty Thanks for your many good wishes. Yes, we can value your collection if you send the album per registered parcel post, but unless you have reason to suppose that it is worth something considerable we should not advise you to go to so much trouble. go to so much trouble.



** The charges for advertisements (prepaid) in this page will be sixpence for every twelve words or less, name and address inclusive, and one halfpenny for every additional word. Single letters, initials, and figures are each counted as a word; but undivided numbers (as 152), and prices (as 153, 5d.) count as only one word each. In every case the name and address of the advertiser must be given for publication, and we cannot at present undertake to supply a private name or number and receive replies to advertisements at our office. All advertisements must be accompanied by remittances, otherwise they cannot be inserted, whenever possible, payment should be made in Postal Orders, and not stamps. Letters should be marked "Advt.," and must be addressed to the Publisher, Hobbies, Bouverie House, Salisbury Square, London, E.C.

Note.—Trade Advertisements can only be inserted in this page at the rate of one shilling per line.

- Aome Electric Bell Set, comprising $2\frac{3}{4}$ in. Electric Bell, Quart Leclanche Battery, Push, 50 feet Wire, Staples, Instructions, 4/6; better value impossible.—Electric, Lord Street, Openshaw, Manchester. H. 2.
- Beautiful Collection.—Between 500 and 600 stamps, take 8/-.—Collection, 2, De Beauvoir Square, N.
- Bicycle, Ordinary, Rational, Tangent Spokes, Hollow Rims, Cushion, Back Wheel, Brook's Saddle, 52 in., 20/-, or exchange for good Fretwork Machine.— Smith, 40, Boone Street, Lee, Kent.
- Demon Hand Camera.—Almost new, only 9/6, including chemicals; specimen photograph sent on receipt of stamped envelope.—"Charles," 22, Oberstein Road, New Wandsworth, London.
- Electrical Hobbies.—How to fit up an Electric Bell Set, make a Motor, and make a Shocking Col. Separate illustrated instructions, free with list, 2d.— Electric, Lord Street, Openshaw, Manchester. F. 3.
- Electric Scarf Pin, complete, 9/-, or offers.—Dakin, 51, Darley Street, Leicester.
- Fretwork Patterns.—The "Challenge" Book of 20 new and artistic Fret Designs, 1/-, post free, Splendid value.—R. Padley, 108, Attercliffe Common, Sheffield.
- Foreign Stamps.—Sheets on approval. Low prices. Liberal discount. Collections purchased for cash.— Phoenix Stamp Company, 31, Radnor Street, Peckham.
- Granular Telephone Transmitters, in polished hardwood cases, 5 in. by 5 in., brass fittings, splendid instruments, 2/6 each, 4/6 pair, free.—Manufacturer, 240, Frederick Road, Aston, Birmingham.
- How to become a Lightning Cartoonist, 7d.— Hotham, 24, West Parade, Huddersfield. B. 1.
- How to learn and start a light artistic business that will produce a living without previous knowledge on the small capital of one pound. Complete instructions, post free, 12 stamps.—James, 11, Stanbury Road, Peckham, S.E.
- Join the Rapid Stamp Exchange.—For Rules, apply Cooke, Hick Street, Birmingham.
- McDonald's Patent Battery has astonished the scientific world. Extraordinary power. Cells 3/103, post free.—Equal to thirty Daniell Cells.—McDonald Bros., Strathtay, N.B.
- New Book of Instuctions in gilding, graining, mixing paint, French polishing, picture-frame making, mount cutting, etc.,1,000 valuable recipes, free, 1/2.—McQuhae, Cockermouth, and all Booksellers. L. 10.
- Nickel Silver Combination Pen, Pencil, and Self-Inking Rubber Stamp with your name. Post free 1s. 2d.—C. Coombes, 27, Prothero Road, Fulham, London.
- Odell Typewriter for Sale, quite new, cost £5 5s., will take £2 10s.—Butcher, Coastguard Hill, Portland. C. 3.
- Pure Wyandotte Cockerel.—Very fine bird, 6/-. Pure White Turkey Cock, 20/-; with one white hen bird, 40/-—Chas. Barker, Upper Norwich Road, East Dereham.

- Photography.—For sale, Griffith Hand Camera with 6 dark slides, 16/-.—Mortimer, Hunterland, Addingham, near Leeds.
- Printing Press with Type, Ink, and Roller complete, very cheap, 3/.—T. Haycock, 100, Northumberland Street, Liverpool.
- Stamp Collection, 570 different stamps, in album.

 Many rare. What offers? Accept Fretwork

 Machine.—H. Owen, Fernbank, Oswestry.
- Stamps.—Hawaiian Islands (obsolete), Fiji Islands, Cyprus, Curacao, Cuba, Java, Eritrea, Gibraltar, Gwallor, Honduras, India (one rupee), Luxemburg, Montenegro, Persia, Perak, Danish Indies, 115 genuine varieties 1/1.—Smith, Arthur Road, Kingston, Surrey.
- Special Advantage to Amateurs. Best Stains on the Market. All Woodworkers should send stamped address for prices to Weaste, 121, Lomax Street, Rochdale.
- The Red List of Illustrated Electrical Goods, 2 stamps.—Gorton Brook Works, Manchester. B. 1.
- Wanted, every reader of Hobbies to send 1/- for one of our Pocket Knives (2 blades), free with our lists; do not delay.—Electric, Lord St., Openshaw, Manchester. D. 1.
- Wanted, Roger Fretsaw, perfect condition. State price, carriage paid, to Arthurs, 35, Rosehill Terrace, Swansea.
- 10 volumes of Matthews Henry's Commentary, beautifully illustrated, quite new, cost 40/-, sell for 20/.—Williams, Hoviley, Hyde.



FOR LADIES AND GENTLEMEN are RICH VALUE, 25 to 30 per cent. saved and carriage paid.

IMMENSE STOCK, new and second - hand. Easy terms from 10s. per month. LISTS FREE. BRITISH CYCLE Manufacturing Co.,

Manufacturing Co., 45, Everton Road, Liverpool, and High Street, Camden Town, LONDON.

NOTICE TO CONTRIBUTORS.

The Editor of "Hobbies" is always ready to receive Suggestions for Articles for insertion in the paper. Any manuscript sent for his consideration must however be accompanied by a fully addressed and stamped envelope. Unsuitable contributions will be returned without avoidable delay, but it must be distinctly understood that the Editor will not hold himself responsible for the loss of any manuscript.



NOTES ON SPORT.

HERE are few events in the athletic world of greater interest than the annual contest on the running path between our two great Universities. To secure the "odd event" at this important meeting is the chief ambition of each of the selected teams of representatives. For some time it has been felt that the two events known as "Putting the shot" and "Throwing the hammer" were not worthy to rank as equal in athletic value to such important contests as the "100 yards," or the "Quarter," and a movement is now on foot having for its object the elimination of one or both of the "strong man" competitions. It is felt that although hammer and weight throwing is well enough in its way, yet very few people ever practice these sports, and consequently competition in them is very limited compared with the more popular running events for which each University has its hundreds of men, all eager to be accounted worthy to receive a "Blue." It is suggested that a half-mile race be substituted for one of the "weight" competitions. Our idea would be to keep the programme of events exactly as it is now. To retain both the "hammer" and the "weight," but to give the winner of each of these half a point, instead of a whole one; thus making "hammer" and "weight," put together, equal to one of the more highly esteemed flat races.

The "World's" Skating Championship contests, at

put together, equal to one of the more highly esteemed flat races.

The "World's "Skating Championship contests, at St. Petersburg, were duly decided on Feb. 7th and 8th, and proved most interesting. St. Petersburg must be a grand place for the skater, as in Russia's chilly capital there is ice all through the winter. An illustration of this is well shown in the fact that although the present season is as mild a one in the East as it is here, yet the famous river Neva, on which the capital stands, is stated to be "Frczen over as usual, traffic being carried across it by means of tramways." In a country where a good-sized river will carry heavy vehicles in a mild winter the skater need have little fears of want of ice interfering with his sport, and skating races can be carried out in St. Petersburg as easily as athletic sports can here. In the skating championship there are four events at different distances, from 500 up to 10,000 metres. To qualify as champion a skater must win outright no less than three of the four. The result of this rule is that more than once the championship contest has resulted in a blank, no single competitor having been able to win the remarkably large proportion of three-fourths of the contests. This time, however, Jap Eden, the famous skater and equally famous cyclist, succeeded in securing first place in every one of the four events, thus winning the coveted championship honour in the most complete and convincing manner. It might be interesting to note the method of deciding these important skating races. The men are drawn in pairs, and so each race consists of sometimes a ereat number of heats, of two men only in each. Then there is no "second round" or "final heat" at all. Everything isruled by time, the winner of the fastest heat being the champion. Eden covered his 500 metres in 50 and 15th seconds, a speed of well over 20 miles an hour, a really remarkable performance, especially when it is remembered that this 500 metres is one lap of an old bicycle track with unraised corner

There are plenty of people who have quite made up their minds that they will have the motor car. A club, on the limited liability lines, has just been formed, having for its object the benefitting of the new horseless vehicle in every possible way. The club intends to fight for an alteration in the present law which now renders motor cycles or carriages practically impossible in England; and it also proposes to give exhibitions, and possibly promote races, and in short do all and everything for the furtherance of the "autocar movement."

It is well known that H.R.H.The Princess of Wales recently purchased a tricycle of decidedly old-ashioned build. The result is, naturally, that a number of people, who are either ignorant of cycling, or who care little for it apart from its present connection with the fashionable world, have ordered similar machines. They make a great mistake. That they should go in for tricycles is well enough; many poor riders would get far better results out of the three-wheeler than out of a bicycle. But why do they not select modern, up-to-date machines? The Princess had special reasons for choosing her tricycle which need not be entered into here. The modern tricycles of the best makers are 30 to 40 per cent. superior at least in point of ease and speed. The very same manufacturers who built the tricycle for the Princess (The Rudge-Whitworth Company, of Birmingham) make as good an "up-to-date" three-wheeler as any firm. To choose the old indifferent tricycle when the modern and vastly improved article is to be had for about the same money, is to own oneself a slave to fashion with a vengeance.

Richmond gained a very creditable victory over Cambridge University a week ago. The match was a curious one as Cambridge scored first, and shortly after this Richmond had two men injured; yet with the score against them, and playing 13 men to 15, the London team not only held their own but succeeded in winning by 2 goals and a try to 2 tries.

"Form" at football is proverbially fickle, and both at Rugby and also at Association rules some curious inconsistencies are sometimes noticeable. Nothing could be more remarkable than the results of the so-called International Rugby Contest now in progress. In the first place England administered a simply crushing defeat to Wales. Then Wales, with her hopes at a very low ebb, meets Scotland, and after a capital exhibition of scientific football scores a victory. Then Scotland in her turn attacks Ireland and makes a draw of it. On this form England stands first, well ahead of the others, Wales a poor second, and Ireland and Scotland at the bottom of the list. So far so good, but what are we to say about Ireland's handsome victory over England, which the men from the Emerald Isle secured at Leeds five or six weeks ago? At the time of writing Ireland has to play Wales. Whichever side wins we shall be landed in a most absurd anomaly. On "paper form," to-day, Wales is better than Ireland; yet Wales was simply crushed by England and Ireland beat England. These results only show what a great element of chance there must be in contests of this sort. International teams are scratch teams whose play is always uncertain and often very unsatisfactory.

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